CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. _____

WASTE DISCHARGE REQUIREMENTS
FOR
CITY OF CLOVIS
FOR
OPERATION
CITY OF CLOVIS MUNICIPAL SOLID WASTE LANDFILL
FRESNO COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Regional Board) finds that:

1. The City of Clovis (hereafter Discharger) owns and operates a municipal solid waste landfill approximately eight miles north of the City of Clovis, just north of Auberry Road and Little Dry Creek, and south of the Friant-Kern Canal, in Sections 28 and 29, T11S, R21E, MDB&M, as shown in Attachment A, which is incorporated herein and made part of this Order.

2. The existing waste management facility consists of one waste management unit comprising the following: 1) an inactive unlined waste management cell covering approximately 23 acres; 2) an inactive clay-lined waste management cell adjacent to the eastern edge of the unlined cell, immediately south of the Friant-Kern Canal, covering 7 acres (Phases I and II); and 3) an active composite-lined expansion cell adjacent to the eastern edge of the existing clay-lined cell, constructed of an approved engineered alternative liner design, consisting of four phases (Phases 1, 2, 4, and 5) and covering 22 acres. The cells are shown in Attachment B, which is incorporated herein and made part of this Order. The facility is comprised of Assessor's Parcel Numbers (APN) 300-080-05 and 300-080-06.

3. The Discharger is in the process of removing the existing inactive unlined waste management cell. The removal process includes the excavation and mechanical sorting of solid waste from soils within the unlined cell, as a means of mitigating known landfill releases and to provide additional soil needs for landfill operations. Waste materials from the west end of the unlined cell are being excavated and placed into a trommel-type sorting machine which uses a two-inch screen to sort soils and the biodegradable portion of refuse material from the larger inert and nonputrescible objects such as plastic containers and metal cans. Materials that pass through the 2-inch screen are transferred on a series of conveyer belts to a storage pile that is used as daily cover material on the landfill's active face. Objects that do not pass the 2-inch screen are discharged into the recently constructed composite-lined landfill cell. Excavation of the unlined cell is proceeding in an easterly direction from the west end and will continue until the entire unlined waste cell is removed.

4. The Discharger proposes to begin constructing a composite liner system in the place of the former unlined waste management cell once the unlined cell has been removed. The Discharger also proposes to expand the active composite-lined waste management cell for the discharge of municipal solid waste to an area of 28 acres east of the existing composite-lined cell. Upon final buildout of these expansion cells, the clay-lined cell will be contiguous with, and surrounded by, the composite-lined cells.

5. On 24 October 1997, the Regional Board issued Order No. 97-227, in which the facility was classified as a Class III waste disposal site for the discharge of municipal solid waste in accordance with the regulations in effect when the order was issued. This Order classifies the units as a Class III landfill that accepts municipal solid waste in accordance with Title 27, California Code of Regulations (CCR), Section 20005, et seq. (Title 27).

SITE DESCRIPTION

6. The facility is in a topographically hummocky region of the Sierra Nevada foothills. The native ground surface elevation ranges between approximately 380 feet above mean sea level at the southern boundary of the facility and 490 feet above mean sea level at the northern facilty boundary.

7. The waste management facility is primarily on the cobbly-clay deposits of the Centerville series and the sandy-loam deposits of the Cometa series. The soils underlying the facility are alluvial soils, consisting of interbedded silty-clay, silty-clayey-sand, and gravelly-cobbly-sand. The soils overlie fractured bedrock at depths ranging from 10 to 100 feet below ground surface. The measured hydraulic conductivity of the native soils underlying the waste management facility ranges between 3×10^{-4} and 1×10^{-3} cm/sec.

8. The closest Holocene fault is the Coast Ranges-Sierran Block Fault zone, approximately 60 miles to the west. A site-specific maximum historical horizontal acceleration of 0.07g resulting from the maximum probable earthquake (MPE) of magnitude 7.25 occurring in the Coast Ranges-Sierran Block Fault Zone was derived empirically from a search for the design earthquake.

9. Land within 1,000 feet of the facility is used as open pasture.

10. The facility receives an average of 14.5 inches of precipitation per year as measured at the Friant Government Camp Station. The mean pan evaporation is 35.9 inches per year as measured at the same Station.

11. The 100-year, 24-hour precipitation event for this facility is estimated to be 4.04 inches, based on the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, Office of Hydrology, NOAA Atlas 2, Volume XI, Figure 31, "*Isopluvials of 100-yr., 24-hr. Precipitation for Northern Half of California*".

12. The waste management facility is not within a 100-year flood plain based on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map, Community-Panel Number 065029-0585-B.

13. There is one industrial supply well within one mile of the site. A few seasonal surface springs were observed during excavation for the composite-lined waste management unit expansion (Cells 1, 2, 4, and 5), which subsequently dried up prior to construction of the liner systems.

WASTE AND SITE CLASSIFICATION

14. The Discharger disposes of municipal and industrial solid wastes, which are classified as "nonhazardous solid waste" or "inert waste" suitable for discharge to a Class III landfill as defined in Title 27 CCR Section 20164. Nonhazardous solid wastes include municipal solid wastes, as referred to in the Code of Federal Regulations, Title 40, Part 258.2.

15. The Discharger has proposed to begin accepting specific types of designated wastes at the facility, including: contaminated soil; dried water treatment plant sludge; and grit screenings. However, the Discharger has not submitted a liner performance demonstration for the containment of designated or nonhazardous waste at a Class II or Class III waste management facility (see "Liner Performance Demonstration" section, below).

16. The site characteristics where the Unit is located (see Finding No. 7) do not meet the siting criteria for a new Class II or Class III landfill contained in Title 27 CCR Sections 20260(a) and (b)(1). As such, the site is not suitable for operating new Units or lateral expansions of existing Units for the discharge and containment of the wastes described in Finding Nos. 14 and 15, without the construction of additional waste containment features in accordance with Title 27 CCR Section 20260(b)(2) and State Water Resources Control Board Resolution No. 93-62.

SURFACE AND GROUND WATER CONDITIONS

17. The *Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin, Fourth Edition* (hereafter Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.

18. Surface drainage is toward Little Dry Creek in the Berenda Creek Hydrologic Area (545.30) of the San Joaquin River Basin.

19. Little Dry Creek is a tributary to the San Joaquin River between Friant Dam and Mendota Pool. The designated beneficial uses of this stretch of the San Joaquin River and its tributaries, as specified in the Basin Plan, are municipal and domestic supply, agricultural irrigation and stock watering supply, industrial process supply, contact and non-contact water

recreation, warm and cold fresh water habitat, warm and cold fresh water migration, warm and cold fresh water spawning, wildlife habitat, and groundwater recharge.

20. Depth to first encountered groundwater ranges from approximately 40 feet below the native ground surface in the southwestern portion of the landfill to greater than 80 feet below the native ground surface in the northern portion. Groundwater elevations range from 350 feet MSL to 370 feet MSL.

21. Drilling records indicate that three geologic units have been encountered beneath the facility, including: a) an upper unconsolidated sequence of silty-clay, silty-clayey-sand, and gravelly-cobbly-sand, varying in thickness from zero to 90 feet; b) a middle unit of highly fractured metamorphic phyllites with an estimated minimum thickness of 50 feet; and c) underlying granitic basement rock.

22. The first encountered groundwater is unconfined within the upper geologic unit. The direction of groundwater flow is generally toward the south beneath the western half of the facility site, and toward the southwest beneath the eastern half of the site. The average groundwater gradient is approximately 0.015 feet per foot. The average groundwater velocity is 18 to 55 feet per year.

23. Monitoring data indicates background groundwater quality has an electrical conductivity (EC) ranging between 300 and 1,000 micromhos/cm, and with total dissolved solids (TDS) ranging between 150 and 800 mg/l.

24. Designated beneficial uses of the groundwater, as specified in the Basin Plan, are domestic and municipal, agricultural, and industrial supply.

25. State Water Resources Control Board Order No. 91-12-DQ (General Permit No. CAS000001), amended 17 September 1992, specifies waste discharge requirements for discharges of storm water associated with industrial activities, excluding construction activities, and requiring submission of a Notice of Intent by industries to be covered under the permit. Waste disposal at landfills, including inert disposal facilities, is considered an industrial activity requiring submittal of a Notice of Intent for coverage under the general permit if storm water is to be discharged off-site. Stormwater from within the landfill perimeter is diverted to a 36-inch stormdrain which discharges to Little Dry Creek. In addition, canal seepage and natural subsurface seepage are collected in the facility subsurface drainage system and discharged to a channel tributary to Little Dry Creek. The Discharger has submitted a report of waste discharge as application for a National Pollutant Discharge Elimination System (NPDES) permit for these surface water discharges.

SURFACE WATER AND GROUNDWATER MONITORING

26. The existing groundwater detection monitoring system consists of one background monitoring well (GMW-2) and nine downgradient monitoring wells (GWMW-1, GWMW-3, GMWM-4, GWMW-5, GWMW-6, GWMW-7, GWMW-8, GWMW-14, and GWMW-18; see Attachment B). In addition, pan lysimeters have been installed beneath the LCRS sumps of the composite-lined units to monitor the vadose zone beneath the landfill.

27. Additional groundwater monitoring wells (GWMW-9, GWMW-10, GWMW-11, GWMW-12, GWMW-13, GWMW-15, GWMW-16, GWMW-17, and GWMW-19) were constructed downgradient (south) of the landfill to determine the lateral and vertical extent of groundwater degradation.

28. The surface water detection monitoring system consists of two upstream and one downstream sampling points in Little Dry Creek as shown in Attachment B.

29. The Discharger's existing detection monitoring programs for surface water and groundwater at this Waste Management Unit satisfy the requirements contained in Title 27.

30. Volatile organic compounds (VOCs) are often detected in a release from a landfill, and are the primary waste constituents detected in groundwater beneath a municipal solid waste landfill. Since volatile organic compounds are not naturally occurring and thus have no background value, they are not amenable to the statistical analysis procedures contained in Title 27 for the determination of a release of wastes from a Unit.

31. Title 27 CCR Sections 20415(e)(8) and (9) provide for the non-statistical evaluation of monitoring data that will provide the best assurance of the earliest possible detection of a release from a Unit in accordance with Title 27 CCR Section 20415(b)(1)(B)2.-4. However, Title 27 CCR does not specify a specific method for non-statistical evaluation of monitoring data.

32. The Regional Board may specify a non-statistical data analysis method pursuant to Title 27 CCR Section 20080(a)(1). Section 13360(a)(1) of the California Water Code allows the Regional Board to specify requirements to protect underground or surface waters from leakage from a solid waste site, which includes a method to provide the best assurance of determining the earliest possible detection of a release.

33. In order to provide the best assurance of the earliest possible detection of a release of non-naturally occurring waste constituents from a Unit, this Order specifies a non-statistical method for the evaluation of monitoring data.

34. The specified non-statistical method for evaluation of monitoring data provides two criteria (or triggers) for making the determination that there has been a release of non-naturally

occurring waste constituents from a Unit. The presence of two non-naturally occurring waste constituents above their respective method detection limit (MDL), or one non-naturally occurring waste constituent detected above its practical quantitation limit (PQL), indicates that a release of waste from a Unit has occurred. Following an indication of a release, verification testing will be conducted to determine whether there has been a release from the Unit, or there is a source of the detected constituents other than the landfill, or the detection was a false detection. Although the detection of one non-naturally occurring waste constituent above its MDL is sufficient to provide for the earliest possible detection of a release, the detection of two non-naturally occurring waste constituents above the MDL as a trigger is appropriate due to the higher risk of false-positive analytical results and the corresponding increase in sampling and analytical expenses from the use of one non-naturally occurring waste constituent above its MDL as a trigger.

GROUNDWATER DEGRADATION

35. "Pollution" means an alteration of the quality of the waters of the State by waste to a degree which unreasonably affects: (1) such waters for beneficial uses, or (2) facilities which serve such beneficial uses [California Water Code, §13050(1)]. Water quality objectives are levels of constituents that are established for the reasonable protection of beneficial uses of waters. Exceedence of water quality objectives, including Maximum Contaminant Levels, constitutes pollution.

36. Section 13304(a) of the California Code states:

"Any person who has discharged or discharges waste into the waters of this state in violation of any waste discharge requirements or other order or prohibition issued by a regional board or the state board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional board, clean up the waste or abate the effects of the waste, or, in the case of threatened pollution or nuisance, take other necessary remedial action . . . ."

37. Section 13267(b)(1) of the California Water Code states:

"In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region . . . shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board

requires. The burden, including costs of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."

38. Groundwater monitoring performed at the landfill has detected volatile organic compounds (VOCs) in samples collected in detection monitoring wells since 1989. Several VOCs have been detected in detection monitoring wells at concentrations above water quality objectives in two or more consecutive monitoring events, including; 1,4-dichlorobenzene; 1,2-dichloroethane; cis-1,2-ddichloroethylene; and vinyl chloride. Other constituents detected in detection wells on two or more consecutive occasions at or below water quality goals include: benzene; 1,2-dichlorobenzene; dichlorodifluoromethane; 1,1-dichloroethane; trans-1,2-dichloroethylene; 1,2-dichloropropane; tetrachloroethylene; and trichloroethylene.

39. Constituents detected in evaluation monitoring wells include: 1,4-dichlorobenzene; cis-1,2-dichloroethylene; ethylbenzene; tetrachloroethylene; toluene; and trichloroethylene. The lateral extent of degradation by VOCs extends to monitoring wells MW-16 and MW-17, approximately 1,000 feet downgradient of the landfill.

40. The groundwater degradation was caused by a release (discharge of waste) from the waste management unit (see Finding Nos. 38 and 39).

41. The current plume of degraded groundwater creates or threatens to create a condition of pollution or nuisance.

42. California Water Code §13304 authorizes the Regional Board to require dischargers to cleanup waste and abate the effects of waste. Cleanup and abatement measures include corrective action measures as required under Title 27.

43. The Discharger is currently conducting evaluation monitoring in accordance with Cleanup and Abatement Order No. 98-711, issued by the Executive Officer in 1998. However, the evaluation monitoring program has not been completed to date.

44. The lateral and vertical extent of groundwater degradation has not been determined for naturally-occurring waste constiuents. Additional groundwater evaluation is needed to delineate the nature and extent of naturally-occurring waste constituents in groundwater.

45. This order requires completion of the evaluation monitoring program and submission of a final feasibility study for corrective action.

EVALUATION MONITORING PROGRAM

46. The discharge of waste constituents that has caused a degradation of groundwater is a violation of Waste Discharge Requirements Order No. 97-227, Prohibitions A.3, A.7, and A.10; Discharge Specification B.6; and General Provisions 1, 3, and 4 of the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements for Discharges Regulated by Title 27 and/or Part 258, August 1997*, which requires that the discharge shall not create a condition of degradation or pollution.

47. The Discharger is in violation of Order No. 97-227, Detection Monitoring Specification E.4, which requires the Discharger not to exceed the water quality protection standard established pursuant to Monitoring and Reporting Program No. 97-227. Evidence of exceedence of the standard for volatile organics occurs when the constituent is detected by the appropriate method. Non-naturally occurring VOCs exceeding the water quality protection standard have been repeatedly detected in the monitoring wells (see Finding Nos. 38 and 39).

48. Subsections 20385(a) (2) and (4) of Title 27 requires the Discharger to initiate an evaluation monitoring program whenever there is significant evidence of a release from the Unit during a detection monitoring program, and to institute a corrective action program when the Regional Board determines that the assessment of the nature and extent of the release and the design of a corrective action program have been satisfactorily completed. These are considered cleanup and abatement activities pursuant to California Water Code §13304. These programs must be applied to all water bearing zones affected by the release, including perched water zones.

49. An evaluation monitoring program is used to assess the nature and extent of a release from a Unit and to design a corrective action program in accordance with §20430 of Title 27 [Title 27, §20425(a)(2)]. In assessing the nature and extent of a release from a Unit, the Discharger is obligated to include a determination of the spatial distribution and concentration of each constituent of concern throughout the zone affected by the release [Title 27, §20425(b)]. The extent of a release is determined when the constituents of concern are not detected above their respective water quality protection standard at groundwater sampling locations out from all sides of the Unit where the constituents of concern have exceeded the water quality protection standard.

50. Evaluation monitoring is required to be implemented when the detection monitoring program determines that waste constituents have leaked from the Unit (see Finding Nos. 38 and 39). In the case of organic compounds that are not naturally occurring, their presence in samples from detection monitoring wells is evidence of a release from the Unit. For naturally occurring compounds and constituents, evidence of a release is based on a measurably

significant increase in their concentration(s) above the upper tolerance limit established in the water quality protection standard.

51. Non-naturally occurring organic compounds have been continuously detected in samples from the detection monitoring wells (see Finding No. 38). This detection of waste constituents constitutes evidence of a release from the Unit. The Discharger is therefore obligated to complete an evaluation monitoring program in accordance with §20425 of Title 27 in order to determine the extent of migration of the waste constituents, to assess their potential threat to the beneficial uses of the areal groundwater, and to prepare a corrective action program in accordance with §20430 of Title 27. Regional Board staff have determined that the lateral and vertical extent of groundwater degradation has been adequately delineated for non-naturally occurring waste constituents.

52. The Discharger has not demonstrated whether naturally occurring inorganic waste constituents have been detected in samples from the detection monitoring wells at concentrations statistically greater than background. The Discharger has yet to establish background concentration limits for naturally occurring inorganic waste constituents to determine whether evidence of a release from the Unit exists. The Discharger is therefore obligated to continue the evaluation monitoring program in accordance with §20425 of Title 27 in order to determine the nature and extent of migration of the naturally occurring waste constituents, to assess their potential threat to the beneficial uses of the areal groundwater, and to prepare a corrective action program in accordance with §20430 of Title 27.

53. Section 20420(k)(5) of Title 27 requires that within 90 days of determining a measurably significant evidence of a release, a discharger shall submit to the Regional Board an amended report of waste discharge, including information specified in §20420(k)(5) of Title 27, to establish an evaluation monitoring program meeting the provisions of §20425 of Title 27.

54. Section 20420(k)(6) of Title 27 requires that within 180 days of determining a measurably significant evidence of a release, a discharger shall submit an engineering feasibility study for a corrective action program necessary to meet the requirements of §20430 of Title 27. At a minimum, the feasibility study shall contain a detailed description of the corrective action measures that could be taken to achieve background concentrations for all constituents of concern.

55. Section 20425(b) of Title 27 requires a discharger to complete an evaluation of the nature and extent of a release from the Unit and to submit the assessment to the Regional Board within 90 days of establishing an evaluation monitoring program.

56. Section 20425(c) of Title 27 requires a discharger to submit an updated engineering feasibility study for corrective action based on the results of the evaluation monitoring program and an amended report of waste discharge to establish a corrective action program meeting the requirements of §20430 of Title 27 to the Regional Board within 90 days of establishing an evaluation monitoring program.

57. Section 20425(d) of Title 27 requires a discharger to submit an amended report of waste discharge to establish a corrective action program meeting the requirements of §20430 of Title 27 to the Regional Board within 90 days of establishing an evaluation monitoring program. The proposed corrective action program is to be based on the data collected pursuant to §20425(b) of Title 27, and on the engineering feasibility study for corrective action submitted pursuant to §20425(c) of Title 27.

58. An evaluation monitoring program was required to have been conducted within the regulatory time frame following the effective date of the Article 5 revisions to Title 23, CCR, §2510 et seq. (Chapter 15, effective 1 July 1991) because a significant statistical evidence of a release has existed since 1989 (see Finding No. 38).

59. The Discharger has not complied with the time frames contained in former Chapter 15 or Title 27 for the completion of an evaluation monitoring program and the submission of a proposed corrective action program (see Finding Nos. 53, 54, 55, and 56), and is therefore in non-compliance with the applicable provisions of Title 27.

60. The Discharger, being a public entity, is unable to comply with the regulatory time frames contained in Title 27 due to the time required to conduct the public bidding process and budgetary constraints. As such, the Discharger has requested an alternate time schedule by which to comply with the evaluation monitoring program requirements contained in Title 27.

61. This Order establishes a time schedule for the completion of an evaluation monitoring program, the submission of an updated engineering feasibility study for the establishment of a corrective action program, and the submission of a report of waste discharge for a corrective action program. Failure to comply with the time schedule contained in this Order may subject the Discharger to a civil monetary liability.

LINER PERFORMANCE DEMONSTRATION

62. On 15 September 2000 the Regional Board adopted Resolution No. 5-00-213, *Request For The State Water Resources Control Board To Review The Adequacy Of The Prescriptive*

Design Requirements For Landfill Waste Containment Systems To Meet The Performance Standards Of Title 27. The State Board responded, in part, that "a single composite liner system continues to be an adequate minimum standard;" however, the Regional Board "should require a more stringent design in a case where it determines that the minimum design will not provide adequate protection to a given body of groundwater."

In a letter dated 17 April 2001, the Executive Officer notified Owners and Operators of Solid Waste Landfills that ". . . the Board will require a demonstration that any proposed landfill liner system to be constructed after 1 January 2002 will comply with Title 27 performance standards. A thorough evaluation of site-specific factors and cost/benefit analysis of single, double and triple composite liners will likely be necessary . . . ."

63. To date, the Discharger has not submitted a liner performance demonstration for the construction of any liner design as demonstration that the current or a proposed liner system would meet the applicable performance standard for a Class II or Class III landfill. This Order therefore does not allow the construction of new waste management unit cells. The submission of a report of waste discharge, including a liner performance demonstration, will be required for a revision of this Order to allow construction of new waste cells.

CEQA AND OTHER CONSIDERATIONS

64. The action to update waste discharge requirements for this facility is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resource Code Section 21000, et seq., and the CEQA guidelines, in accordance with Title 14 CCR, Section 15301.

65. This order implements:

    a. *The Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin, Fourth Edition*;

    b. The prescriptive standards and performance goals of Chapters 1 through 7, Subdivision 1, Division 2, Title 27, of the California Code of Regulations, effective 18 July 1997, and subsequent revisions;

    c. The prescriptive standards and performance criteria of RCRA Subtitle D, Part 258; and

    d. State Water Resources Control Board Resolution No. 93-62, *Policy for Regulation of Discharges of Municipal Solid Waste*, adopted 17 June 1993.

66. Section 13267(b) of California Water Code provides that: "In conducting an investigation specified in subdivision (a), the Regional Board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposed to discharge within

its region, or any citizen or domiciliary, or political agency or entity of this state who had discharged, discharges, or is suspected of discharging, or who proposed to discharge waste outside of its region that could affect the quality of the waters of the state within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. The monitoring and reporting program required by this Order and the attached Monitoring and Reporting Program No. ____ are necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges the waste subject to this Order.

PROCEDURAL REQUIREMENTS

67. All local agencies with jurisdiction to regulate land use, solid waste disposal, air pollution, and to protect public health have approved the use of this site for the discharges of waste to land stated herein.

68. The Regional Board notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

69. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

70. Any person affected by this action of the Regional Board may petition the State Water Resources Control Board to review the action in accordance with Sections 2050 through 2068, Title 23, California Code of Regulations. The petition must be received by the State Water Resources Control Board, Office of Chief Counsel, P.O. Box 100, Sacramento, California 95812, within 30 days of the date of issuance of this Order. Copies of the laws and regulations applicable to the filing of a petition are available on the Internet at http://www.swrcb.ca.gov/water_laws/index.html and will be provided on request.

IT IS HEREBY ORDERED, pursuant to Sections 13263 and 13267 of the California Water Code, that Order Nos. 97-227 and 98-711 are rescinded, and that the City of Clovis, its agents, successors, and assigns, in order to meet the provisions of Division 7 of the California Water Code and the regulations adopted thereunder, shall comply with the following:

A. PROHIBITIONS

1. The discharge of 'hazardous waste' or 'designated waste' is prohibited. For the purposes of this Order, the term 'hazardous waste' is as defined in Title 23, California Code of Regulations, Section 2510 et seq., and 'designated waste' is as defined in Title 27.

2. The discharge of wastes outside of a Unit or portions of a Unit specifically designed for their containment is prohibited.

3. The discharge of waste to a closed Unit is prohibited.

4. The discharge shall not cause the release of pollutants, or waste constituents in a manner which could cause a condition of nuisance, degradation, contamination, or pollution of groundwater to occur, as indicated by the most appropriate statistical or nonstatistical data analysis method and retest method listed in this Order, the Monitoring and Reporting Program, or the Standard Provisions and Reporting Requirements.

5. The discharge of solid or liquid waste or leachate to surface waters, surface water drainage courses, or groundwater is prohibited.

6. The discharge shall not cause any increase in the concentration of waste constituents in soil-pore gas, soil-pore liquid, soil, or other geologic materials outside of the Unit if such waste constituents could migrate to waters of the State — in either the liquid or the gaseous phase — and cause a condition of nuisance, degradation, contamination, or pollution.

7. Construction of new lateral expansion waste management units or cells is prohibited.

B. DISCHARGE SPECIFICATIONS

1. Nonhazardous wastes shall be discharged only to existing lined Units.

2. The discharge shall remain within the designated disposal area at all times.

C. FACILITY SPECIFICATIONS

1. The Discharger shall, in a timely manner, remove and relocate any wastes discharged at this facility in violation of this Order.

2. The Discharger shall immediately notify the Regional Board of any flooding, unpermitted discharge of waste off-site, equipment failure, slope failure, or other change on-site conditions which could impair the integrity of waste or leachate containment facilities or precipitation and drainage control structures.

3. Water used for facility maintenance shall be limited to the minimum amount necessary for dust control, and construction.

4. The Discharger shall maintain in good working order any facility, control system, or monitoring device installed to achieve compliance with these waste discharge requirements.

5. Methane and other landfill gases shall be adequately vented, removed from the Unit, or otherwise controlled to prevent the danger of adverse health effects, nuisance conditions, or the impairment of the beneficial uses of surface water or groundwater due to migration through the unsaturated zone.

6. Surface drainage within the waste management facility shall either be contained on-site or be discharged in accordance with applicable storm water regulations.

7. The Discharger shall maintain a *Storm Water Pollution Prevention Plan* and *Monitoring Program and Reporting Requirements* in accordance with State Water Resources Control Board Order No. 97-03-DWQ, or retain all storm water on-site.

D. DETECTION MONITORING SPECIFICATIONS

1. The Discharger shall comply with the detection monitoring program provisions of Title 27 for groundwater, surface water, and the unsaturated zone, and in accordance with Monitoring and Reporting Program No. ____. [Title 27 CCR Section 20415(e)(6)].

2. The Discharger shall provide Regional Board staff a minimum of **one week** notification prior to commencing any field activities related to the installation, repair, or abandonment of monitoring devices, and a minimum 48 hour notification prior to the collection of samples associated with a detection monitoring program, evaluation monitoring program, or corrective action program.

3. The Discharger shall comply with the Water Quality Protection Standard as specified in this Order, Monitoring and Reporting Program No. ____, and the Standard Provisions and Reporting Requirements, dated April 2000.

4. The Water Quality Protection Standard for organic compounds which are not naturally occurring and not detected in background groundwater samples shall be taken as the detection limit of the analytical method used (i.e., US-EPA methods 8260 and 8270). The repeated detection of one or more non-naturally occurring organic compounds in samples above the Water Quality Protection Standard from detection monitoring wells is evidence of a release from the Unit.

5. The concentrations of the constituents of concern in waters passing the Point of Compliance shall not exceed the concentration limits established pursuant to Monitoring and Reporting Program No.____.

6. For each monitoring event, the Discharger shall determine whether the landfill is in compliance with the Water Quality Protection Standard using procedures specified in Monitoring and Reporting Program No.____ and Title 27 CCR Section 20415(e).

7. The Discharger shall submit for Executive Officer review and approval a Sample Collection and Analysis Plan. The Sample Collection and Analysis Plan shall at a minimum include:

   a. Sample collection procedures describing purging techniques, sampling equipment, and decontamination of sampling equipment;

   b. Sample preservation information and shipment procedures;

   c. Sample analytical methods and procedures;

   d. Sample quality assurance/quality control (QA/QC) procedures; and

   e. Chain of Custody control.

8. For any given monitored medium, the samples taken from all monitoring points and background monitoring points to satisfy the data analysis requirements for a given reporting period shall all be taken **within a span not to exceed 30 days**, unless the Executive Officer approves a longer time period, and shall be taken in a manner that ensures sample independence to the greatest extent feasible. Specific methods of collection and analysis must be identified. Sample collection, storage, and analysis shall be performed according to the most recent version of USEPA Methods, such as the latest editions, as applicable, of: (1) Methods for the Analysis of Organics in Water and Wastewater (USEPA 600 Series), (2) Test Methods for Evaluating Solid Waste (SW-846, latest edition), and (3) Methods for Chemical Analysis of Water and Wastes (USEPA 600/4-79-020), and in accordance with the approved Sample Collection and Analysis Plan.

9. If methods other than USEPA-approved methods or Standard Methods are used, the exact methodology shall be submitted for review and approval by the Executive Officer prior to use.

10. The **methods of analysis and the detection limits** used must be appropriate for the expected concentrations. For the monitoring of any constituent or parameter that is found in concentrations which produce more than 90% non-numerical determinations (i.e.,

"trace" or "ND") in data from background monitoring points for that medium, the analytical method having the lowest method detection limit (MDL) shall be selected from among those methods which would provide valid results in light of any matrix effects or interferences.

11. **"Trace" results** – results falling between the MDL and the practical quantitation limit (PQL) – shall be reported as such, and shall be accompanied both by the estimated MDL and PQL values for that analytical run.

12. **MDLs and PQLs** shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. These MDLs and PQLs shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the lab, rather than simply being quoted from USEPA analytical method manuals. In relatively interference-free water, laboratory-derived MDLs and PQLs are expected to closely agree with published USEPA MDLs and PQLs.

13. If the laboratory suspects that, due to a change in matrix or other effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived MDL/PQL values, the results shall be flagged accordingly, along with estimates of the detection limit and quantitation limit actually achieved. The **MDL shall always be calculated such that it represents the lowest achievable concentration associated with a 99% reliability of a nonzero result**. The PQL shall always be calculated such that it represents the lowest constituent concentration at which a numerical value can be assigned with reasonable certainty that it represents the constituent's actual concentration in the sample. Normally, PQLs should be set equal to the concentration of the lowest standard used to calibrate the analytical procedure.

14. All **QA/QC data** shall be reported, along with the sample results to which they apply, including the method, equipment, analytical detection and quantitation limits, the percent recovery, an explanation for any recovery that falls outside the QC limits, the results of equipment and method blanks, the results of spiked and surrogate samples, the frequency of quality control analysis, and the name and qualifications of the person(s) performing the analyses. Sample results shall be reported unadjusted for blank results or spike recoveries. In cases where contaminants are detected in QA/QC samples (i.e., field, trip, or lab blanks), the accompanying sample results shall be appropriately flagged.

15. Unknown chromatographic peaks shall be reported, flagged, and tracked for potential comparison to subsequent unknown peaks that may be observed in future sampling events. Identification of unknown chromatographic peaks that recur in subsequent sampling events may be required.

16. The statistical method shall account for data below the practical quantitation limit (PQL) with one or more statistical procedures that are protective of human health and the environment. Any PQL validated pursuant to Title 27 CCR Section 20415(e)(7) that is used in the statistical method shall be **the lowest concentration (or value) that can be reliably achieved** within limits of precision and accuracy specified in the WDRs for routine laboratory operating conditions that are available to the facility. The Discharger's technical report, pursuant to Title 27 CCR Section 20415(e)(7), shall consider the PQLs listed in Appendix IX to Chapter 14 of Division 4.5 of Title 22, CCR, for guidance when specifying limits of precision and accuracy. For any given constituent monitored at a background or downgradient monitoring point, an indication that falls between the MDL and the PQL for that constituent (hereinafter called a "trace" detection) shall be identified and used in appropriate statistical or nonstatistical tests. Nevertheless, for a statistical method that is compatible with the proportion of censored data (trace and ND indications) in the data set, the Discharger can use the laboratory's concentration estimates in the trace range (if available) for statistical analysis, in order to increase the statistical power by decreasing the number of "ties".

17. Background for water samples or soil-pore gas samples shall be represented by the data from all samples taken from applicable background monitoring points during that reporting period (at least one sample from each background monitoring point). The Discharger may propose an alternate statistical method [to the methods listed under Title 27 CCR Section 20415(e)(8)(A-D)] in accordance with Title 27 CCR Section 20415(e)(8)(E), for review and approval by the Executive Officer.

18. The Discharger may propose an alternate statistical method [to the methods listed under Title 27 CCR Section 20415(e)(8)(A-D)] in accordance with Title 27 CCR Section 20415(e)(8)(E), for review and approval by the Executive Officer. Upon receiving written approval from the Executive Officer, alternate statistical procedures may be used for determining the significance of analytical results for common laboratory contaminants (i.e., methylene chloride, acetone, diethylhexyl phthalate, and di-n-octyl phthalate). Nevertheless, analytical results involving detection of these analytes in any background or downgradient sample shall be reported and flagged for easy reference by Regional Board staff.

19. The Discharger shall use the following non-statistical method for all analytes that are detected in less than 10% of the background samples. The non-statistical method shall be implemented as follows:

    a. From the constituent of concern or monitoring parameter list, identify each analyte in the **current** sample that exceeds either its respective MDL or PQL. The Discharger shall conclude that the exceedance provides a preliminary indication of a release or a change in the nature or extent of the release, at that monitoring point, if ***either:***

1) The data contains two or more analytes that are detected in less than 10% of background samples that equal or exceed their respective MDLs; or

2) The data contains one or more analyte that equals or exceeds its PQL.

b. **Discrete Retest** [Title 27 CCR Section 20415(e)(8)(E)]:

1) In the event that the Discharger concludes (pursuant to paragraph 19.a., above) that there is a preliminary indication of a release, then the Discharger shall immediately notify Regional Board staff by phone or e-mail and, within 30 days of such indication, shall collect two new (retest) samples from the monitoring point where the release is preliminarily indicated.

2) For any given retest sample, the Discharger shall include, in the retest analysis, **only the laboratory analytical results for those analytes detected in the original sample**. As soon as the retest data are available, the Discharger shall conclude that there is measurably significant evidence of a release if two or more analytes equal or exceed their respective MDLs or if one or more analyte equals or exceeds its PQL and shall:

a) **Immediately** notify the Regional Board about any constituent or constituents verified to be present at the monitoring point, and follow up with written notification submitted by certified mail **within seven days** of validation; and

b) Comply with Detection Monitoring Specification D.20., below if any constituent or constituents were verified to be present.

3) Any analyte that triggers a discrete retest per this method shall be added to the monitoring parameter list such that it is monitored during each regular monitoring event.

20. If the Discharger determines that there is measurably significant evidence of a release from the Unit at any monitoring point, the Discharger shall **immediately** implement the requirements of **XI. Response To A Release, C. Release Has Been Verified**, contained in the Standard Provisions and Reporting Requirements.

E. EVALUATION MONITORING SPECIFICATIONS

1. The Regional Board has identified the City of Clovis as the primary or active responsible discharger for purposes of California Water Code, Section 13307.1. **By 31 December 2005**, the City of Clovis shall submit a letter to the Regional Board that identifies all

current record owners of fee title of the site. For purposes of this provision, the site includes the landfill property. The City of Clovis shall certify to the Regional Board that the required notifications have been made at the time a cleanup or site closure proposal is made or before the Regional Board makes a determination that no further action is required. If property ownership changes in the future, the City of Clovis must notify the Regional Board **within 30 calendar days** of the date on which it is informed of the change.

2. **By 28 February 2006**, the Discharger shall submit a work plan to complete an Evaluation Monitoring Program that meets the provisions of §20425(b) of Title 27 and this Order.

3. **By 31 July 2006**, the Discharger shall complete an Evaluation Monitoring Program to the satisfaction of the Executive Officer and that meets the provisions of §20425(b) of Title 27, and a report shall be submitted that describes all actions and monitoring taken to complete the Evaluation Monitoring Program.

4. The Discharger shall submit a **semi-annual** status report to the Regional Board in accordance with the schedule for semi-annual self-monitoring reports contained in Monitoring and Reporting Program No. _____. The report shall describe the progress made to comply with this Order. The semi-annual status report shall include a description of all activities, water quality monitoring, and water quality analyses conducted, since the previous semi-annual status report was prepared, to comply this Order. More frequent reporting may be required as necessary to ensure the protection of human health or the environment.

5. At a minimum, the following documentation is needed to complete the Evaluation Monitoring Program:

    a. An analysis of all the information gathered to determine the lateral and vertical extent of each waste constituent released from the Unit. This assessment shall include a determination of the spatial distribution and concentration of each constituent of concern throughout the zone affected by the release.

    b. An assessment of the lateral and vertical extent for each waste constituent in groundwater shall be determined when the constituent no longer meets the trigger criteria for detection in accordance with the detection monitoring program contained in Monitoring and Reporting Program No. ___. For a non-naturally occurring waste constituent, the extent will be determined when groundwater sample analyses do not detect any non-naturally occurring waste constituents at or above the practical quantitation limit (PQL), or no more than one non-naturally occurring waste

constituent is detected at or above the method detection limit (MDL) and below the PQL. For naturally occurring waste constituents, or waste constituents that have a statistically derived water quality protection standard, the extent will be determined when groundwater sample analyses do not detect a released constituent at a "measurably significant" concentration as defined by the water quality protection standard.

c. A determination of the water quality protection standard for evaluation monitoring shall be based on a sufficient number of background monitoring points that represent the quality of groundwater (organic and inorganic compounds) in the uppermost aquifer that has not been affected by a release from the Unit in accordance with §20415(b)(1) and §20415(b)(2) of Title 27. If more than one water bearing zone is present beneath the Unit and included in the evaluation monitoring program, then a water quality protection standard shall be established independently for each water bearing zone.

d. A table listing the constituents of concern that includes the concentration limit for metals and general water quality parameters based on a statistical evaluation of the background concentrations of these parameters.

e. A description of how the determination of the spatial distribution and concentration of each constituent of concern throughout the zone affected by the release was accomplished.

6. **By 31 July 2006**, the Discharger shall submit, pursuant to §20425(c) of Title 27, a report containing a final engineering feasibility study for corrective action pursuant to §20420(k)(6) of Title 27. At a minimum, the feasibility study shall contain a detailed description of the corrective action measures that could be taken to achieve background concentrations for all constituents of concern.

7. **By 31 December 2006**, the Discharger shall submit, pursuant to §20425(d) of Title 27, an amended Report of Waste Discharge, based on the data collected pursuant to Evaluation Monitoring Specification E.5 and on the engineering feasibility study submitted pursuant to Evaluation Monitoring Specification E.6, to establish a corrective action program meeting the requirements of §20430 of Title 27. The amended Report of Waste Discharge shall contain a plan and proposed time schedule to cleanup and abate the effects of all waste discharged to the soil and groundwater from the Unit.

8. In conjunction with the assessment conducted pursuant to Evaluation Monitoring Specification E.5, and while awaiting final approval of the amended Report of Waste Discharge, submitted pursuant to Evaluation Monitoring Specification E.7, the

Discharger shall monitor groundwater, surface water, and the unsaturated zone to evaluate changes in water quality resulting from the release from the Unit. In conducting this monitoring, the Discharger shall comply with the requirements of §20425(e) of Title 27.

F. PROVISIONS

1. The Discharger shall maintain a copy of this Order at the facility and make it available at all times to facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel.

2. The Discharger shall comply with all applicable provisions of Title 27 and 40 Code of Federal Regulations Part 258 (Subtitle D) that are not specifically referred to in this Order.

3. The Discharger shall comply with Monitoring and Reporting Program No. ___, which is incorporated into and made part of this Order.

4. The Discharger shall comply with the applicable portions of the Standard Provisions and Reporting Requirements for Waste Discharge Requirements for Nonhazardous Solid Waste Discharges Regulated by Title 27 and/or Subtitle D (Title 27 CCR Section 20005 et seq. and 40 CFR 258 et seq.), dated April 2000, which are hereby incorporated into this Order.

5. In the event the Discharger does not comply or will be unable to comply with any prohibition or limitation of this Order for any reason, the Discharger shall notify the appropriate Regional Board office by telephone **as soon as** it or its agents have knowledge of such noncompliance or potential for noncompliance, and shall confirm this notification in writing **within two weeks**. The written notification shall state the nature, time, and cause of noncompliance, and shall describe the measures being taken to prevent recurrences and shall include a timetable for corrective actions.

6. All reports and transmittal letters shall be signed by persons identified below:

    a. For a corporation: by a principal executive officer of at least the level of senior vice-president.

    b. For a partnership or sole proprietorship: by a general partner or the proprietor.

    c. For a municipality, state, federal or other public agency: by either a principal executive officer or ranking elected or appointed official.

    d. A duly authorized representative of a person designated in a, b or c above if;

1) The authorization is made in writing by a person described in a, b, or c of this provision;

2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a Unit, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

3) The written authorization is submitted to the Regional Board.

e. Any person signing a document under this Section shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

7. The Discharger shall take all reasonable steps to minimize any adverse impact to the waters of the State resulting from noncompliance with this Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature, extent, and impact of the noncompliance.

8. The owner of the waste management facility shall have the continuing responsibility to assure protection of waters of the state from discharged wastes and from gases and leachate generated by discharged waste during the active life, closure, and postclosure maintenance period of the Unit(s) and during subsequent use of the property for other purposes.

9. The fact that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this Order shall not be regarded as a defense for the Discharger's violations of the Order.

10. To assume ownership or operation under this Order, the succeeding owner or operator must apply in writing to the Regional Board requesting transfer of the Order within 14 days of assuming ownership or operation of this facility. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Regional Board, and a statement. The statement shall comply with the signatory requirements contained in Provision F.6. and state that the new owner or operator

assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer of this Order shall be approved or disapproved by the Regional Board.

11. The Discharger shall establish cost estimates for initiating and completing corrective action for all known or reasonably foreseeable releases from the landfill, and submit these estimates to the Executive Officer for review and approval.

12. The Discharger shall obtain and maintain assurances of financial responsibility for initiating and completing corrective action for all known or reasonably foreseeable releases from the landfill in an amount approved by the Executive Officer, and shall submit the financial assurance mechanism to the Financial Assurances Section of the California Integrated Waste Management Board.

13. The Discharger is required to maintain financial assurance mechanisms for closure and post-closure maintenance costs as specified in Chapter 6 of Title 27. The Discharger is required to submit the financial assurance mechanism to the Financial Assurances Section of the California Integrated Waste Management Board, which determines if the mechanism meets the requirements of Chapter 6, Title 27, and if the amount of coverage is adequate.

14. The Discharger shall complete the tasks contained in these waste discharge requirements in accordance with the following time schedule:

Task	Compliance Date
A. Evaluation Monitoring	
1) Submit a work plan for completing an Evaluation Monitoring Program (see Evaluation Monitoring Specification No. E.2)	**28 February 2006**
Task	Compliance Date
2) Submit a report describing completion of the Evaluation Monitoring Program (see Evaluation Monitoring Specification No. E.3)	**31 July 2006**
3) Submit a final engineering feasibility study for a corrective action program (see Evaluation Monitoring Specification No. E.6)	**31 July 2006**
4) Submit an amended report of waste discharge to	**31 December 2006**

establish a corrective action program (see Evaluation Monitoring Specification No. E.7)	

B. Financial Assurance Review

1) Annual Review of Financial Assurance for initiating and completing corrective action (see Provision F.12)	**31 July each year**
2) Annual Review of Financial Assurance for closure and postclosure maintenance (see Provision F.13)	**31 July each year**

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provision of this Order, the Executive Officer may apply to the Attorney General for judicial enforcement or issue a complaint for Administrative Civil Liability.

I, THOMAS R. PINKOS, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on _____.

_____
THOMAS R. PINKOS, Executive Officer

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